

IN THE CLAIMS

Please amend claims 1, 3, 5-9, 12, 14-18 and 20; and cancel claim 4, 13 and 19 as follows:

1. (Currently Amended) An electric motor screw driver system, comprising:

a driver having a first signal generation means for generating a rotation start signal representing to operate a fastening operation of the driver and a second signal generation means for generating a rotation stop signal denoting a stop of the fastening operation;

a power controller for controlling ~~to operates~~ the fastening operation of the driver by supplying electric power to the driver in response to the rotation start signal and ceasing the supply of electric power to the driver in response to the rotation stop signal;

a driver monitoring means for monitoring the fastening operation of the driver based on ~~pre-determined~~ predetermined fastening information, the rotation start signal and the rotation stop signal in order to determine whether the fastening operation is appropriately completed or not, ~~generates~~ to thereby generate an information signal based on a result of monitoring the fastening operation, wherein the driver monitoring means includes computation means for performing at least one test mode to determine a predetermined target time range included in the predetermined fastening information; and

a display unit for receiving the information signal from the driver monitoring means ~~and displaying~~ to thereby display the information signal.

2. (Original) The system as recited in claim 1, wherein the driver monitoring means includes determination means for determining one appropriate and complete cycle of fastening operation based on a time interval between the rotation start signal and the rotation stop signal.

3. (Currently Amended) The system as recited in claim 2, wherein ~~the predetermined fastening information includes a predetermined target time range~~ and the determination means generates a completion signal representing the one appropriate and complete cycle when ~~the time interval is fallen in the predetermined target time range~~ the rotation stop signal is activated between a minimum target time and a maximum target time of the predetermined target time range before the rotation start signal is inactivated.

4. (Cancelled)

5. (Currently Amended) The system as recited in claim 1, wherein the driver monitoring means further includes:

storage means for storing operation information of a plurality of modes and the predetermined fastening information for analyzing fastening operation of the driver; and

a user control panel for generating a selection signal for selecting a mode among a the plurality of modes; ~~and~~

~~computation means in response to the selection signal for performing a selected mode by using the corresponding operation information~~

wherein a selected mode is performed by the computation means based on the operation information.

6. (Currently Amended) The system as recited in claim 5, wherein a the plurality of ~~the~~ modes includes an operation mode for monitoring the fastening operation of the driver by comparing a time interval between the rotation start signal and the rotation stop signal and the predetermined fastening information to thereby ~~generating~~ generate a completion signal

representing a completion of fastening operation.

7. (Currently Amended) The system as recited in claim 6, wherein a the plurality of ~~the~~ modes further includes:

a counting mode for setting a target number of fastening operations and counting the number of ~~the~~ generated completion signal signals to generate a second completion signal when the number of ~~completion signal~~ generated completion signals is identical to the target number;

a setting mode for testing a target object to be subjected to the fastening operation to obtain the predetermined fastening information including the predetermined target time range; and

an initial mode for initializing the predetermined fastening information in the storage means.

8. (Currently Amended) The system as recited in claim 7, wherein the setting mode includes:

a first setting mode for receiving a test rotation start signal and a test rotation stop signal for the target object from the driver;

a second setting mode for determining the target time range by using a time interval between the test rotation start signal and the test rotation stop signal; and

a third setting mode for storing the target time ~~range~~ range into the storage means.

9. (Currently Amended) An electric motor screw driver system, comprising:

a driver having a first signal generation means for generating a rotation start signal representing to operate a fastening operation of the driver and a second signal generation means for generating a rotation stop signal denoting a stop of the fastening operation;

a power controller for controlling ~~to operate~~ the fastening operation of the driver by supplying electric power to the driver in response to the rotation start signal and ceasing the supply of electric power to the driver in response to the rotation stop signal;

a driver monitoring means for monitoring the fastening operation of the driver based on ~~pre-determined~~ predetermined fastening information, the rotation start signal and the rotation stop signal in order to determine whether the fastening operation is appropriately completed or not, ~~generates~~ to thereby generate an information signal based on a result of monitoring the fastening operation, wherein the driver monitoring means includes computation means for performing at least one test mode to determine a predetermined target time range included in the predetermined fastening information;

an operation processing unit for outputting the ~~result~~ information signal from the driver monitoring means to an external peripheral apparatus and for receiving an operation information signal from the external peripheral apparatus in order to cooperate with the external peripheral apparatus; and

a display unit for receiving the information signal from the driver monitoring means ~~and displaying~~ to thereby display the information signal.

10. (Original) The system as recited in claim 9, wherein the peripheral apparatus includes a convey belt, an electric motor screw driver, a personal computer or a remote control terminal.

11. (Original) The system as recited in claim 9, wherein the driver monitoring means includes determination means for determining one appropriate and complete cycle of fastening operation based on a time interval between the rotation start signal and the rotation stop signal.

12. (Currently Amended) The system as recited in claim 9, wherein ~~the predetermined fastening information includes a predetermined target time range and~~ the determination means generates a completion signal representing the one appropriate and complete cycle when ~~the time interval is fallen in the predetermined target time range~~ the rotation stop signal is activated between a minimum target time and a maximum target time of the predetermined target time range before the rotation start signal is inactivated.

13. (Cancelled)

14. (Currently Amended) The system as recited in claim 9, wherein the driver monitoring means further includes:

storage means for storing operation information of a plurality of modes and the predetermined fastening information for analyzing fastening operation of the driver; and

a user control panel for generating a selection signal for selecting a mode among a the plurality of modes; and

~~computation means in response to the selection signal for performing a selected mode by using the corresponding operation information~~

,wherein a selected mode is performed by the computation means based on the operation information.

15. (Currently Amended) The system as recited in claim 9 14,

wherein a the plurality of ~~the~~ modes includes an operation mode for monitoring the fastening operation of the driver by comparing a time interval between the rotation start signal and the rotation stop signal and with the predetermined fastening information to thereby ~~generating~~ generate a completion signal representing a completion of fastening operation.

16. (Currently Amended) A driver monitor in an electric motor screw driver system, ~~where in~~ wherein the electric motor screw driver system including a driver a driver having a first signal generation means for generating a rotation start signal representing to operate a fastening operation of the driver and a second signal generation means for generating a rotation stop signal denoting a stop of the fastening operation and a power controller for controlling ~~to operates~~ the fastening operation of the driver by supplying electric power to the driver in response to the rotation start signal and ceasing the supply of electric power to the driver in response to the rotation stop signal, the driver monitor, comprising:

a driver monitoring means for monitoring the fastening operation of the driver based on ~~pre-determined~~ predetermined fastening information, the rotation start signal and the rotation stop signal in order to determine whether the fastening operation is appropriately completed or not, ~~generates to thereby generate an~~ information signal based on a result of monitoring the fastening operation, wherein the driver monitoring means includes computation means for performing at least one test mode to determine a predetermined target time range included in the predetermined fastening information;

an operation processing unit for outputting the result information signal from the driver monitoring means to external peripheral apparatus and receiving operation information signal from the external peripheral apparatus in order to cooperate with the external peripheral apparatus; and

a display unit for receiving the information signal from the driver monitoring means ~~and displaying to thereby display~~ the information signal.

17. (Currently Amended) The ~~system~~ driver monitor as recited in claim 16, wherein the driver monitoring means includes determination means for determining one appropriate and complete cycle of fastening operation based on a time interval between the rotation start signal and the rotation stop signal.

18. (Currently Amended) The ~~system~~ driver monitor as recited in claim 17, wherein ~~the predetermined fastening information includes a predetermined target time range and the~~ determination means generates a completion signal representing the one appropriate and complete cycle ~~when the time interval is fallen in the predetermined target time range~~ the rotation stop signal is activated between a minimum target time and a maximum target time of the predetermined target time range before the rotation start signal is inactivated.

19. (Cancelled)

20. (Currently Amended) The ~~system~~ driver monitor as recited in claim 16, wherein the driver monitoring means further includes:

storage means for storing operation information of a plurality of modes and the predetermined fastening information for analyzing fastening operation of the driver; and

a user control panel for generating a selection signal for selecting a mode among a the plurality of modes; ~~and~~

~~computation means in response to the selection signal for performing a selected mode by using the corresponding operation information~~

wherein a selected mode is performed by the computation means based on the operation information.